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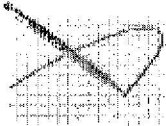
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Subject Fw: HHRA Issue Summary for May 23rd Project Manager's  
Meeting

----- Forwarded by Eric Blischke/R10/USEPA/US on 05/24/2006 08:41 AM -----



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05/22/2006 02:58 PM

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Subject HHRA Issue Summary for May 23rd Project Manager's  
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All,

Here is EPA's list of outstanding issues for the Human Health Risk Assessment.

Evaluation of exposure to in-water sediments by divers: EPA added direct exposure to in-water sediments for workers, boat fishers and divers. EPA believes that exposure to in-water sediments by workers and boat fishers has been resolved (pending review and approval of April 21, EPC and Exposure Factors TM). For exposure to in-water sediments by divers, EPA proposes performing a semi-quantitative analysis. EPA plans on working with Mike Poulsen of DEQ to develop a comparative analysis of diver exposure compared to other sediment exposure scenarios.

Surface water as a source of drinking water: The work plan calls for an evaluation of short-term exposure to surface water as a drinking water source for transients. However, EPA has determined that drinking water is a protected beneficial use of the Lower Willamette River (based on DEQ water quality rules). As a result, EPA has determined that MCLs are potential ARARs for surface water at the site. In our December 2, 2005 Round 3 Data Gaps Memo, EPA stated that surface water should be evaluated according to standard drinking water residential and work exposure scenarios. A path forward for resolving this issue has not been agreed to.

Transition Zone Water: EPA and the LWG have been engaged in discussions regarding human exposure to drinking water. At this time, TZW does not need to be treated as a drinking water source but should be screened against tap water PRGs and MCLs to ensure protection of surface water. EPA also believes that TZW should also be evaluated to protect human consumers of crayfish and bivalves through a comparison to fish consumption AWQC and/or site specific criteria developed to ensure that contaminants do not accumulate in crayfish and bivalves at concentrations that pose a threat to human health. At this time, the MCL and bivalve consumption issues remain unresolved.

Surface Water: Although EPA recognizes that human health risks due to fish consumption will be

evaluated through fish tissue, EPA believes that surface water should be compared to fish consumption AWQCs adjusted to account for site specific fish consumption rates (i.e., 175 g/day). This is necessary in part because certain chemicals (e.g., VOCs) were not analyzed for in fish tissue. This issue remains unresolved.

Collection of Additional Smallmouth Bass Tissue: EPA believes that additional smallmouth bass tissue is required to represent the range of exposure across the site and support the HHRA. This issue remains unresolved.

PBTs in breast milk: This issue was mentioned as a future topic for discussion in Appendix C of the Programmatic Workplan. If a breast-feeding exposure scenario is included in the HHRA, the method to use to estimate exposure for an infant and how to characterize exposure and risk needs to be determined. EPA and DEQ are in the process of developing a proposal for evaluation of this pathway.

PAHs and PBDEs: EPA stated in the December 2, 2005 Round 3 Data Gaps Memo that any additional fish tissue samples include PBDEs and better detection limits for PAHs. This issue remains unresolved.

**Progress Report on ERA Weight of Evidence Framework Development**  
**18 May 06**

1. **Status.** EPA is leading development of a detailed weight of evidence (WOE) decision framework needed to rigorously evaluate the relative weight of each line of evidence (LOE) being used in the ERA for Portland Harbor. A draft version of the WOE framework tables were presented on May 9 by Jennifer Peterson (OR DEQ) and Bob Gensemer (Parametrix). Feedback from the group was generally positive, and a consensus was reached to continue development of the WOE framework for the ERA. It was further decided that EPA (Bob Gensemer, and Joe Goulet, leads) and DEQ (Jennifer) would lead the next round of framework development, with support and peer review from LWG (Lisa Saban, lead). This subgroup held an organizational conference call on 17 May, where it was decided that Jennifer would first work on the framework “key” and Bob would do a final QA check on the measurement endpoint table to be sure it is accurate and consistent with the WOE framework.

**2. Outstanding Issues**

- Subgroup agreed that *measurement endpoint and LOE table* will still be maintained on a parallel path with the more detailed WOE framework tables. We still need to double-check its accuracy against the WOE framework, and to ensure that LOEs of most importance to making 3A vs. 3B data gaps decisions continue to be highlighted.
- The WOE “key” (i.e., descriptions of each WOE attribute, definitions, and ranking schemes) needs to be reasonably complete before populating the detailed WOE framework tables for each receptor. This is the first priority for the subgroup at this stage.
- Next step will be to *populate some of the WOE tables for one or two receptors* as a trial to evaluate whether the overall scheme or “key” are working as intended.
- Next step after this example will be to do the detailed work of *populating the WOE framework tables for all receptors and LOEs*.
- Still some disagreement on “grey areas” on LOE table. More detailed WOE tables should help resolve.
- Transition Zone Water – further discussion required to resolve LOE and WOE for evaluation of transition zone water.

**3. Path Forward**

- Subgroup hopes to have WOE “key” completed in draft form by the end of May
- Subgroup hopes to have measurement endpoint table QA’d and completed by end of May. *It is thought that this table will be the primary means of facilitating 3A vs. 3B data gaps decisions.* The more detailed WOE framework tables would be helpful, but will require more time to develop than may currently be available to inform these decisions.
- In June, subgroup will begin work on populating the WOE framework tables. Time required to fully complete this task is as yet uncertain, but we propose that the smaller subgroup continue to work together to expedite development of the draft framework as soon as possible.

- *Overall goal is to have WOE framework completed in draft form by late June or early July if possible so that the EPA and LWG teams can review and revise in time for use/application in time for use in the Round 2 Comprehensive report.* Firm deadlines have yet to be established. Depending on the timing and extent of peer review needed for the framework, it may also be able to help inform 3A vs. 3B data gaps decisions.

## **Progress Report on Modeling Approach**

1. **Status.** During a meeting held on May 2, 2006, two approaches to the contaminant fate and transport modeling were discussed. Bruce Hope described EPA's proposed mass balance contaminant fate and transport model. Carl Stivers presented the LWG approach which relies on hydrodynamic sedimentation modeling and evaluation of key processes on a site or location specific basis. A conference call took place on May 17, 2006 to resolve the approaches. At the conference call the following approach was tentatively agreed to:
  - Develop a hybrid approach that makes use of the LWG's EDFC hydrodynamic sedimentation model and the EPA fate and transport model being developed by Bruce Hope.
  - Utilize the recently collected sedflume and settling velocity estimates as well as other site data to refine the hydrodynamic sedimentation modeling effort.
  - Concurrently with the above step, get the EPA fate and transport model up and running use site data. Based on the results of initial model runs, identify additional data needs and/or refinements to the fate and transport model segments developed by EPA.
  - Output from the EDFC model will be "chunked" to match the fate and transport model segments. The goal of the effort will be to use the EDFC model to estimate the flux of sediment and water in and out of each cell.
2. **Issues:** Issues that need to be addressed regarding this approach include:
  - Data needs to support the approach (in-water data and upland contaminant load data – e.g., stormwater data)
  - The mechanics of linking up the two approaches
  - Level of effort required to link up the two approaches
  - When to link the two approaches (soon based on initial runs of fate and transport model and calibrated hydrodynamic model or later once sedimentation model has been refined based on recently collected sedflume and settling velocity data)
  - The ability of Stella to handle the increased computation
  - How to account for specific processes (e.g., advective groundwater transport, prop wash)
  - Schedule and timing.
3. **Next Steps:** The next steps are to
  - Develop a better understanding of the pros and cons of this approach.
  - Develop greater clarity on the expectations of the fate and transport modeling approach.
  - Reach agreement on the objectives and tools for the fate and transport modeling effort.
  - Discuss the application of the food web model and its relationship to the fate and transport model.